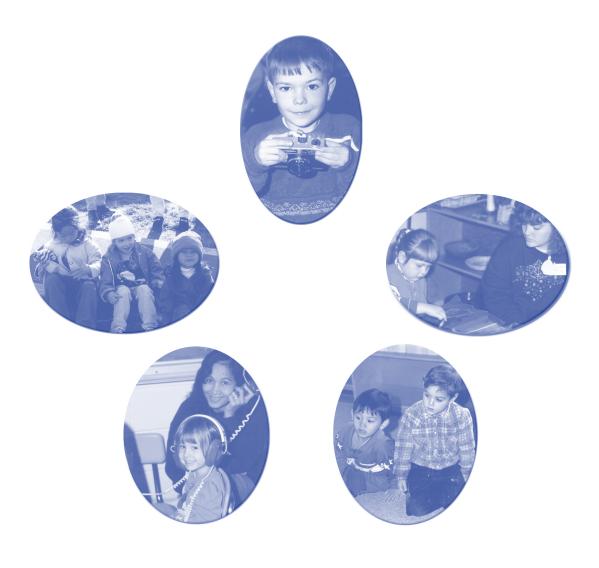


An Investment in Children and Families YEARS 9 & 10 LONGITUDINAL STUDY REPORT







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Credits

The Early Childhood Education and Assistance Program (ECEAP) Longitudinal Study is a community effort. Thirty-two local ECEAP contractors and their staff and hundreds of elementary school administrators, teachers, and support staff collected data on children and families participating in the study. The parents themselves provided invaluable information about the effects of ECEAP services on their children and families. The data collection process required an immense but crucial effort by all who participated, and their assistance is very much appreciated.

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YEARS 9 & 10 (1996-97, 1997-98) ECEAP LONGITUDINAL STUDY REPORT EXECUTIVE SUMMARY

Background

Washington State's Early Childhood Education and Assistance Program (ECEAP) is a community-based, family-centered, comprehensive prekindergarten program for low-income three- and four-year-olds and their families. Since 1988, a quasi-experimental Longitudinal Study of ECEAP has been conducted to measure outcomes of the enrolled children and their families. All Study participants were four years old when they received ECEAP services. A carefully-constructed Comparison group of ECEAP-eligible children and families that did not receive ECEAP services is included in the Study as well. The primary purpose of the Study has been to determine ECEAP's effectiveness in preparing economically disadvantaged three- and four-year-olds to achieve success in their elementary schooling and beyond. This report on the ninth and tenth years of the Study (1996-97 and 1997-98) focuses on characteristics and outcomes of those ECEAP Longitudinal Study participants who have received public assistance as an income source.

Findings

Among the findings in this report, the most notable shifts experienced by participants from Study enrollment to Years 9 & 10 were the decrease in public assistance and the increase of wages as an income source.

- ◆ Fifty-two percent fewer ECEAP children and families were at or below the poverty level in Year 9 than at the time of their enrollment
- ◆ Fifty-seven percent fewer ECEAP children and families were at or below the poverty level in Year 10 than at the time of their enrollment
- Only 20 percent fewer Comparison group participants were at or below the poverty level in Year 10 than at the time of their enrollment
- ◆ Twenty-three percent more of all Study participants earned wages as an income source at Year 9 than at enrollment
- Twenty-eight percent more of all Study participants earned wages as an income source at Year 10 than at enrollment
- Sixteen percent fewer Study participants received public assistance as an income source at Year 9 than at enrollment
- Seventeen percent fewer Study participants received public assistance as an income source at Year 10 than at enrollment
- Thirty-six percent more Study participants receiving public assistance as an income source received other sources of income at Year 9 than at enrollment



- Nearly 50 percent more Study participants receiving public assistance as an income source received other sources of income at Year 10 than at enrollment
- ◆ Twenty percent fewer children in families receiving public assistance lived with their mother only at Year 9 than at enrollment

Study families who still receive public assistance at Years 9 and 10 continue to struggle for themselves and their children. Compared to families who do not receive public assistance, those participants who received public assistance:

- had less family resources (e.g., food for two meals a day, dependable transportation, money to pay medical bills);
- took their children to the doctor less often;
- were less likely to have health insurance;
- felt their children did not enjoy school as much;
- had more negative perceptions of their children's academic progress; and
- had children who were more frequently tardy and absent from school

Reported findings are found in greater detail in the body of the Years 9 and 10 Report.

OCD Comments

Through the years, Study results have repeatedly documented specific positive outcomes for children and families who participated in the program, as indicated above. Given the unique opportunity to follow the experience of a group of low-income Washington families over time, ECEAP administration decided to focus the analysis of data gathered in the Study for Years 8 through 10 on the impact that welfare reform efforts and programs have had on these families. That analysis comprises the majority of this combined Years 9 & 10 report.

While Year 11 data has been gathered, analysis has been suspended in favor of new efforts to revise the ECEAP research design. In pursuit of this, a contract was recently awarded to an independent consulting firm to guide the statewide ECEAP program in determination of what management data should be gathered and what shared outcomes are desired for the program. Focus groups, surveys, and interviews with local programs, families, legislators, and other stakeholders will be used in the coming months to determine these needs. The end result of this effort will be development of a Request for Proposals to select a research organization which will develop the ongoing system of measurement and analysis for the program. ECEAP administration anticipates providing future outcome-based reporting for each yearly class of program participants in an effort to more directly measure the impact of program design changes on participating children and families.



CHAPTER 1

THE IMPACT OF POVERTY: AN EXAMINATION OF ECEAP LONGITUDINAL STUDY PARTICIPANTS RECEIVING PUBLIC ASSISTANCE

Background

The State of Washington has been operating a statewide system of comprehensive early childhood education and assistance services for nearly 15 years. The Early Childhood Education and Assistance Program (ECEAP) was authorized by the Early Childhood Assistance Act of 1985. ECEAP is a community-based, family-centered, comprehensive prekindergarten program for low-income three- and four-year-olds and their families. The program provides an opportunity for strengthening children's cognitive, social, and emotional skills in order to enhance future educational success.

Since 1985, ECEAP has continued to grow and expand. The number of children served annually by ECEAP has increased from 1,000 in 1986 to over 8,000 during the 1999-2000 program year. ECEAP has served over 80,000 children and families since its inception. Currently, ECEAP has 35 contractors operating over 290 program sites across the state.

The Context of Poverty

The United States has been experiencing major demographic shifts in recent years (Jensen, 1993). As the findings from the ECEAP Longitudinal Study are reviewed, the prospects for the well-being of the children and families in this Study and all children and families in Washington should be considered in light of social, political, and philosophical changes, as well as economic changes, resultant from these shifts. One demographic shift that has critical implications for outcomes of children and families in the ECEAP Longitudinal Study is the increase in the poverty rate. The poverty rate of children has increased dramatically in the past fifteen years and is now higher than any other age group, at well over double the rate for adults or the elderly in 1994 (National Center for Children in Poverty, 1996). Between 1979 and 1994, the number of children under age six living in poverty in the United States grew from 3.5 million to 6.1 million (National Center for Children in Poverty, 1996). In spite of programs and initiatives designed to combat child poverty, children living in the United States still experience the effects of poverty more often than do children in other countries with similar living standards (Bureau of the Census, 1990a).

The economic status of many of the families in the ECEAP Longitudinal Study could be described as dire. Over 40 percent of the entire year 9 ECEAP Longitudinal Study children and families (this includes both ECEAP group and Comparison group participants) lived in poverty during 1996-1997. Forty-three percent (N = 263) of the ECEAP and 32 percent (N = 55) of the Comparison children and families lived in poverty during Year 9. The median annual income for the entire Year 9 ECEAP Longitudinal Study was \$21,000 and supported an average of almost five people.

Poverty can have a profound effect, both directly and indirectly, on how children fare within societal institutions and structures (Hamburg, 1985; Katz, 1990). Whether it is because poverty produces a stigma on those in this life circumstance, or because of fewer opportunities for cognitive and social development in the early years, or a combination of both, poverty does affect child and family outcomes (Zill, Moor, Smith, Stief, and Coiro, 1991; Duncan, Brooks-Gunn, and Klebanov, 1994; Entwisle, 1995). Issues regarding poverty and its effects must be addressed before society can expect relatively short-term social and educational programs to change the life-course of its participants. The report of the Year 9 and 10 ECEAP Longitudinal Study findings must be considered in light of the economic circumstance of the target population. The target population for ECEAP is defined as low income and a family must be at or below poverty level at the time of ECEAP enrollment (110 percent of the Federal Poverty Level as of the 1999-2000 program year). Forty-three percent of the Study children and families are at or below poverty level at Year 9. ECEAP also targets services to children at risk of school failure for developmental or environmental reasons, and enrolls up to 10 percent of the total program capacity with children at risk because of neglect, abuse, or disabling conditions, regardless of family income. Furthermore, one of every 10 ECEAP enrollment slots is targeted to Native American children and children of migrant and seasonal farm workers. The economic condition of the families in the Study is adverse upon program entry and continues to be adverse over ten years later. Poverty impacts the life circumstance across generations and programs such as ECEAP are only one piece of a complex prevention and intervention network. However, there are promising findings in this report.

Since the target population of ECEAP is, by definition, low income, it is often concluded that many of the families in the ECEAP Longitudinal Study receive public assistance as a means of financial support. Questions regarding who actually receives public assistance are becoming increasingly important as the Temporary Assistance for Needy Families (TANF) Block Grant of the Personal Responsibility and Work Opportunities Reconciliation Act of 1996 changes how public assistance is delivered. Eligibility requirements for public assistance have changed as has the length of time public assistance can be accessed by a given individual or family. It is of interest to examine the characteristics and outcomes of those ECEAP Longitudinal Study participants who received public assistance as an income source. This report continues last year's report by summarizing characteristics and outcomes of the participants in the ECEAP Longitudinal Study who received public assistance as a source of income and, as such, focuses on Goal 8 of the Early Childhood Education and Assistance Program.

ECEAP
Philosophy
and Goals

During the 1996-97 program year, the philosophy of ECEAP was based on the following theoretical assumptions which, in turn, drove program implementation:

 a young child can benefit substantially from a comprehensive prekindergarten program that fosters the "whole-child"development, identifies and remedies health and developmental problems, and increases skills in preparation for success in school and society;



- a child's family is the primary contributor to the child's development and progress;
- access to community resources designed to support the child's development and learning, as well as the family's well-being, should be maximized; and
- ♦ low-income children, in particular, should have the opportunity to counteract the impact poverty has on them and their families.

The overall goal of ECEAP is to bring about a greater degree of educational and social proficiency in children from low-income families. It is presumed that gains made in these areas will assist children in dealing with their environment, as well as facing the challenges of the educational process. Recognizing the interdependence of the factors contributing to a child's health, well-being, and development, a comprehensive approach to helping children achieve educational and social competence is set forth in the ECEAP Performance Standards.

Five goals addressed the developmental needs of the children ECEAP served during the 1996-97 program year:

- **Goal 1** Establish patterns and expectations of success for each child, which will create a climate of confidence for present and future learning and overall development;
- **Goal 2** Enhance each child's cognitive processes and skills with particular attention to conceptual and communication skills, including appropriate steps to correct current developmental problems;
- **Goal 3** Encourage self-confidence, spontaneity, curiosity, and self-discipline which will assist in the development of each child's social and emotional well-being;
- **Goal 4** Enhance each child's health and physical abilities, including appropriate steps to correct current physical problems; and
- **Goal 5** Enhance each child's access to an adequate diet, as well as the family's knowledge of sound nutritional practices.

Three goals addressed the needs and aspirations of ECEAP families:

- **Goal 6** Enhance the ability of each child and family to relate to each other and to those outside the family;
- **Goal 7** Enhance the sense of dignity and self-worth within each child and family; and
- **Goal 8** Empower families to improve parenting skills, increase knowledge of and access to appropriate resources, advocate for children's and families' needs, and increase self-sufficiency.



The eight goals of ECEAP cluster into four general outcome categories: 1) cognitive and physical development (Goals 2 and 4); 2) social and emotional well-being (Goals 1 and 3); 3) health and nutrition (Goals 4 and 5); and 4) family well-being and empowerment (Goals 6, 7, and 8). This report focuses on the outcomes associated with Goal 8; specifically areas related to access to appropriate resources and increased self-sufficiency.

The ECEAP Program

ECEAP is a "whole-child," comprehensive, family-focused prekindergarten program designed to help low-income children prepare for and succeed in the educational system. In addition, ECEAP assists families in supporting and participating in their children's success. ECEAP staff, community leaders, and parents collaborate to design and implement programs most appropriate for children and families living in their community.

A multitude of factors affect a child's ability to learn and develop. Such factors may be environmental or individually-based, or may be an interaction of environmental and individual characteristics. With this in mind, ECEAP is comprised of four interactive components: 1) education; 2) health; 3) parent involvement; and 4) family support.

Education. Children are prepared for entry into school through a developmentally appropriate learning environment that: 1) fosters intellectual, social, physical, and emotional growth; 2) emphasizes early identification of and intervention in problems interfering with learning; and 3) eases the transition from prekindergarten to kindergarten and primary education. Local ECEAP providers develop and select a developmentally based curriculum that incorporates readiness skills (such as recognition of numbers, shapes, and colors); language and literacy skills; gross and fine motor skills; social-emotional and self-concept development; and age-appropriate health, nutrition, and personal safety education. Additionally, field trips and visitors to the program broaden children's awareness and understanding of the community in which they live. In general, ECEAP providers strive to expose children to new ideas, concepts, and experiences and create in all children an excitement for discovery and learning.

Cultural awareness and ethnic pride are actively promoted and integrated within ECEAP's educational component. When a majority of children speak a language other than English, at least one teacher or aide who speaks that language actively participates in group and center experiences. In cases where a few children speak an alternate language, one adult, often a community resource person or volunteer, works closely with the children or child.

Health. ECEAP conducts or provides for health screenings within the first 90 days of a child's enrollment in the program. Medical, dental, mental health, and the nutritional needs of each child are evaluated. Remediation of problems identified through the developmental screenings includes referral to community services, identification of community resources, and/or provision of services or funds.

ECEAP health staffs assist in updating immunizations against certain vaccinepreventable diseases. In areas where fluoride is not available through drinking water, ECEAP arranges for fluoride treatments for children whose parents grant their consent.

Since few factors in a child's physical and mental development are as critical as adequate nutrition, all children in ECEAP receive at least one meal a day during group sessions. Meals and snacks for children are designed to satisfy the daily nutritional needs for as many nutritional elements as possible, and careful attention is paid to the nutritional needs of young children in the context of their culture when planning the menus. Education about sound nutritional practice is included in the curriculum to encourage lifelong healthy eating habits.

Parent Involvement. Recognized as the primary source of educational direction and motivation for their children, parents are directly involved with children in the group setting and during home visits. ECEAP provides opportunities for parenting skills training and support group participation based on the needs expressed by parents. Parents are also encouraged to be involved in local program decision making through their program's parent-run Policy Council and subcommittees.

Family Support. ECEAP's commitment to family empowerment is expressed in part via a family support model of service delivery. Staff support families in accessing needed social services and eliminating the need for services through improved family health. ECEAP's family service staff facilitate an assessment of family strengths at program enrollment. ECEAP staff then provide support to families to locate and access community resources in order to enhance family strengths. ECEAP staff also provide awareness and educational training opportunities throughout the year. Collaborative arrangements with, and in-kind contributions from, various service providers and community organizations enable ECEAP staff to link families to a network of support.

Cost of Services

The cost of providing comprehensive services and support to ECEAP children and families has been shared through the collaborative efforts of ECEAP, other state agencies, and community service providers. Local, state, and federal dollars are combined to cover staff salaries and benefits, facilities, equipment and materials, services, transportation, and other costs. Statewide average ECEAP funding per slot for the 1996-97 program year was \$3,716.

Program
Administration
and
Implementation

Statewide administration of ECEAP is through the Washington State Office of Community Development, Community Services Division. Local ECEAP programs operate through various organizations, including school districts, local government agencies, non profit organizations, child care providers, tribal organizations, and community colleges. ECEAP has evolved into an increasingly community-focused and needs-driven family service. Local flexibility in program design has been encouraged within basic program requirements. Contractors must comply with program requirements along a range specified in program standards.



Three program organizational structures, designated as "center-based," "home-based," and "locally designed," described most local ECEAP service delivery models in operation during the 1996-97 program year.

Center-Based ECEAP Programs

This program structure provide children and families with:

- at least ten hours per week of group programming spread over three or more days;
- at least one and one-half hours of staff and parent contact time per month; and
- a home visit with the child's family at least twice a year to facilitate education.

Home-Based ECEAP Programs

This program type provided:

- an emphasis on training parents to be effective educators;
- weekly 90-minute visits during which staff members train, role model, and encourage parents to teach their children; and
- a weekly peer group experience for children.

Locally Designed ECEAP Programs

This program structure provided:

- the opportunity for a community to design a program around its unique needs; and
- combinations of elements of center-based and home-based options or a weekly schedule that differs from the typical centerbased program.

ECEAP Children and Families

Typically, a child enrolled in ECEAP is three or four years old, not yet in kindergarten, and from a family whose income during the last 12 months or calendar year has been at or below the federal poverty level (110 percent of the Federal Poverty Level starting in the 1999-2000 program year). The intent of ECEAP, to provide enhanced learning opportunities for children at risk of school failure, allows local programs to enroll up to 10 percent of their total capacity with children who are at risk because of neglect, abuse, disabling conditions, or other developmental or environmental factors, regardless of family income. In addition, one of every 10 ECEAP enrollment slots statewide is targeted to Native American children and children of migrant and seasonal farmworkers to help remedy historically limited access to developmental and social services. During Years 9 and 10 of the study, nearly 8,000 children were served.



Evaluating ECEAP's Effectiveness

A legislative requirement for an external evaluation of ECEAP was included in the Early Childhood Assistance Act of 1985. The Northwest Regional Educational Laboratory began examining the effectiveness of ECEAP in 1988 and has completed the ninth and tenth year of child and family data collection and analysis. This report provides an in-depth examination of public assistance receipt among the Study population in Year 9 and a subsample (Cohort 3 participants) of Year 10 ECEAP families.

Chapter 2 provides an overview of the Study methodology and timeline, a description of the ECEAP and Comparison samples, and a description of Study measures and variables. Results of data analyses follow in Chapter 3. Chapter 4 presents a discussion and summary of results.







CHAPTER 2

THE LONGITUDINAL STUDY DESIGN

Background

The Early Childhood Assistance Act of 1985 established ECEAP and included a legislative requirement to assess program effectiveness. Washington State Office of Community Development (OCD), ECEAP's administering agency, contracted with Northwest Regional Educational Laboratory (NWREL) of Portland, Oregon, to conduct the ECEAP evaluation. Since 1988, a quasi-experimental Longitudinal Study of ECEAP has been conducted to measure outcomes of the enrolled children and their families. The primary purpose of the Study is to determine the effectiveness of ECEAP in preparing economically disadvantaged three- and four-year-olds to achieve success in their elementary schooling and beyond. All Study participants were four years old when they received ECEAP services.

The evaluation follows a sample of ECEAP children from the beginning of their ECEAP experience through the 12th grade. A matched Comparison group has been constructed of children who were ECEAP-eligible, but were not served by this program. Comparisons have been made between the ECEAP and the Comparison group on academic achievement, social success, and other key indicators. A broad range of child and family variables was included in the Study in order to capture the comprehensive nature of ECEAP. The extent to which individual differences in children's development is enhanced and sustained and the family's ability to support and enhance their child's development is also addressed.

OCD, the Washington State Office of the Superintendent of Public Instruction, and ECEAP program directors provided input concerning the ECEAP evaluation design and implementation. Instrumentation used to follow children and their families during the elementary school years was collected or developed by NWREL research staff after analysis of first year of data. Consideration was given to the capability of the instruments to capture the constructs of interest, the ease of administration, and state and local program resources.

Study Methodology

A number of evaluation questions were posed for the ECEAP Longitudinal Study with a focus on outcomes of ECEAP children and families. Outcome evaluation examines the attainment of program objectives related to short-and long-term change in participants' behavior, attitudes, knowledge or level of problems. The two general questions an outcome evaluation seeks to answer deal with: 1) level of change; and 2) whether any change experienced was attributable to the program. While the first question can be answered using a pre- and post-test of participants, there are inherent difficulties in attributing change to any program. These problems, or threats to validity, include the influence of extraneous historical events,



maturation of participants, biased selection of groups, mortality of study participants, and statistical regression to the mean.

The problem of attributing change to a program rather than to extraneous factors, such as those cited above, has led to the use of experimental or quasi-experimental research designs in evaluation. The ECEAP Longitudinal Study has employed a quasi-experimental design since random assignment to treatment and control groups was not possible and is a necessary condition for a true experimental design. For example, in a true experimental design, all children eligible for ECEAP participation would be in a pool and randomly assigned to either the ECEAP group or the control group which would not participate in ECEAP. Assignment to either group would be random and not take into consideration level of need or criteria other than ECEAP eligibility. True experimental designs are difficult to implement in real life settings where the human condition is of paramount importance to those implementing and administering social and educational programs. Quasiexperimental designs attempt to approximate experimental control by various methods. In the case of the ECEAP Longitudinal Study, naturally occurring groups, similar to those in the ECEAP program, were used as the control.

The key issue in designing an outcome evaluation is drawing comparisons. Ideally, the groups that are compared were the same before exposure to the program, and, without the program, would have been expected to stay the same. Randomization achieves this in true experimental designs. Quasi-experimental designs only approximate this level of control, and as a result, can yield ambiguous results. In the ECEAP Longitudinal Study, a matched Comparison group was constructed in order to draw conclusions regarding change as a result of program participation.

ECEAP children and their families have been followed since the child's ECEAP year and may continue to be followed through the child's 12th grade year or the equivalent in order that outcomes of participation in the program can be assessed. The following questions are the focus of this portion of the evaluation:

- How well is ECEAP preparing children for success in school, i.e., what gains do ECEAP children make in their cognitive, motor, behavioral, and social development that encourage success in school?
- How well is ECEAP preparing families to participate in and support their children's educational experience?
- Do the effects of ECEAP participation last?

To answer these questions, a sample of 1,358 ECEAP children and their families was assessed at the beginning and end of their prekindergarten year and are being assessed annually each spring from kindergarten



through the 6th grade, and then possibly again in 9th and 12th grade. Assessment focuses on child and family success and how outcomes change over time.

Annual data collection has been conducted by local ECEAP providers with assistance from local education agencies. Cognitive, physical, social, emotional, and behavioral outcomes are measured through individually administered cognitive and developmental assessments, parent interviews, teacher ratings of children's behavior and family participation, school records, and reports on children's health. During the 4th and 8th grades, children participate in statewide achievement tests (Comprehensive Test of Basic Skills [CTBS]). Scores from the CTBS are used to compare ECEAP children to the broader population of Washington's children. The fall and spring measures during the ECEAP year, together with the measures used for following children and their families through the 12th grade, encompass a broad definition of competence from which to draw conclusions about later school performance.

A Comparison sample of non-ECEAP children was constructed in the fall of 1991. The Comparison sample allows an examination of how well ECEAP children and families are progressing through the children's educational careers relative to a group of peers who did not participate in a comprehensive prekindergarten program. The questions addressed by this portion of the Longitudinal Study include:

- ◆ Are ECEAP children better prepared for success in school than their peers, i.e., are ECEAP children more advanced at the start of school than their peers in terms of cognitive, motor, behavioral, and social development?
- ◆ Do families of ECEAP children participate in and support their children's educational experience more than families of Comparison children?
- Do the differences last?

To explore these questions, a Comparison group was constructed of 322 children. The Comparison group children were matched to ECEAP children on age, gender, ethnicity, and primary language, and did not participate in the ECEAP or federal Head Start program. While income or poverty was a variable the groups were to be matched on, key differences between the two groups existed with regard to this variable. These poverty differences have resulted in part because: 1) ECEAP programs recruited Comparison children from among children participating in the free and reduced-price lunch program, whose income eligibility requirements are higher than the requirement for ECEAP participation; and 2) ECEAP programs prioritize service in their area for families with lowest incomes, resulting in reduced number of unserved families at the lower levels of poverty. The Comparison group may be followed with the ECEAP sample through the 12th grade. For the remainder of the Study, the Comparison children will be followed each spring with the same measures as the ECEAP children.



Previous reports on the ECEAP Longitudinal Study have examined all outcome measures for all cohorts. Such reports have allowed an examination of the status of participants on the various measures and indices on an annual basis. This reporting method provides an overview of the status of participants on wide ranging areas of concern. There has been a need to examine the wealth of data provided by the children and families in the ECEAP Longitudinal Study in light of emerging programmatic as well as social issues. This report departs from the first seven ECEAP Longitudinal Study reports in that the focus of the data analysis is on one particular issue that has been determined to be of high programmatic and social importance and interest by ECEAP administrators and researchers. Therefore, the Years 9 and 10 ECEAP Longitudinal Study report will follow the Year 8 Report in focusing on the socioeconomic status of study participants, specifically as it relates to public assistance receipt. Additionally, this report will highlight changes in the economic status of ECEAP Longitudinal Study participants from 1996 to 1998.

Study Timeline

The Study began in the fall of 1988 when the first of three cohorts of children enrolled in ECEAP. The Study may continue through the Study participant's 12^{th} grade year or the equivalent. Table 2.1 displays the timeline of the Longitudinal Study until Cohort 3 children reach 12^{th} grade. In total, 1,358 ECEAP children were recruited to participate in the Study. Depending on the year of their enrollment in the program, those remaining (N = 868) were enrolled in 5^{th} , 6^{th} , or 7^{th} grade during Year 9 of the Study.

Table 2.1a

ECEAP Longitudinal Study Timeline
Years 1-8

	YEAR 1 1988/89	YEAR 2 1989/90	YEAR 3 1990/91	YEAR 4 1991/92	YEAR 5 1992/93	YEAR 6 1993/94	YEAR 7 1994/95	YEAR 8 1995/96
ECEAP	Cohort 1	Cohort 2	Cohort 3					
KINDERGARTEN		Cohort 1	Cohort 2	Cohort 3 & Comparison				
GRADE 1			Cohort 1	Cohort 2 & Comparison	Cohort 3 & Comparison			
GRADE 2				Cohort 1 & Comparison	Cohort 2 & Comparison	Cohort 3 & Comparison		
GRADE 3					Cohort 1 & Comparison	Cohort 2 & Comparison	Cohort 3 & Comparison	
GRADE 4						Cohort 1 & Comparison	Cohort 2 & Comparison	Cohort 3 & Comparison
GRADE 5							Cohort 1 & Comparison	Cohort 2 & Comparison
GRADE 6								Cohort 1 & Comparison

Table 2.1b ECEAP Longitudinal Study Timeline Years 9-16

	YEAR 9 1996/97	YEAR 10 1997/98	YEAR 11 1998/99	YEAR 12 1999/00	YEAR 13 2000/01	YEAR 14 2001/02	YEAR 15 2002/03	YEAR 16 2003/04
GRADE 5	Cohort 3 & Comparison							
GRADE 6	Cohort 2 & Comparison	Cohort 3 & Comparison						
GRADE 7	Cohort 1 & Comparison							
GRADE 8								
GRADE 9			Cohort 1 & Comparison	Cohort 2 & Comparison	Cohort 3 & Comparison			
GRADE 10								
GRADE 11								
GRADE 12						Cohort 1 & Comparison	Cohort 2 & Comparison	Cohort 3 & Comparison

As the table illustrates, the study has the following structure:

- ♦ Cohort 1: The first cohort of ECEAP children was recruited in the fall of 1988 and assessed at that time and again in the spring of 1989. These children began the follow-up in the spring of 1990 and may be further assessed each spring until they finish high school. The Comparison sample for Cohort 1 was recruited in the fall of 1991 when the children were in second grade, and may be followed each spring through grade 6 and then at grade 9 and grade 12.
- ♦ Cohort 2: Cohort 2 ECEAP children were recruited in the fall of 1989 and assessed in the fall and spring of their ECEAP year. They may be followed until they finish high school. The Comparison sample for Cohort 2 was recruited in fall of 1991 when the children were in first grade and may also be followed each spring through grade 6 and then at grade 9 and grade 12.
- Cohort 3: In the fall of 1990, the third cohort of ECEAP children was recruited and assessed in the fall and spring of their ECEAP year. Children in this cohort may be followed through their high school experience. The Comparison sample for Cohort 3 was recruited in the fall of 1991 when the children began kindergarten and may be followed each spring as well through grade 6 and then at grade 9 and grade 12.

This report presents Study results for each cohort from Year 1 of the evaluation Study through Year 9, when the first cohort was in 7th grade, with regard to socioeconomic status, specifically related to receipt of public assistance. Data collected during Year 10 of the Longitudinal Study from only Cohort 3 families will also be reported.

The ECEAP Sample

The ECEAP sample represents approximately one-third of the number of children for whom enrollment openings were available during the first three years of the Study. ECEAP children were recruited from three successive cohorts of prekindergarten entrants beginning in the fall of 1988. ECEAP contractors were assigned to a specific cohort, with priority for the initial cohort placed on well-established programs. This ensured that a fully-developed ECEAP program was in place when the children were sampled. Some contractors enrolling large numbers of children participated in multiple cohort samples in order to ease the work load required at key data collection points. ECEAP contractors are divided among the cohorts in the following manner:

- ♦ Cohort 1 Contractors: Chelan-Douglas Child Services
 Association; Community Colleges of Spokane; Economic
 Opportunity Committee of Clark County; Olympia School
 District; Puget Sound Educational Service District; Snohomish
 County Human Services; and Washington State Migrant Council.
- ♦ Cohort 2 Contractors: Aberdeen School District; Kennewick School District; Omak School District; Puget Sound Educational Service District; Reliable Enterprises, Centralia; Walla Walla School District; and Washington State Migrant Council.
- ◆ Cohort 3 Contractors: City of Seattle; Clallam-Jefferson Community Action; Community Child Care Center; Community Colleges of Spokane; Dayton School District; Economic Opportunity Committee of Clark County; Enterprise for Progress in the Community; Granger School District; Kitsap Community Action Program; Lewis-Clark Early Childhood Program; Lower Columbia College; Manson School District; Mid-Columbia Children's Council; Northeast Washington Rural Resources; Olympia School District; Puget Sound Educational Service District; Selah School District; Skagit Valley College; Snohomish County Human Services; South Bend School District; United Indians of All Tribes Foundation; Washington State Migrant Council; and Whatcom County Opportunity Council.

Selection of children for participation in the Study was conducted by ECEAP program staff at the local level. Program staff were instructed to draw a random sample of one-third of the children on their fall enrollment list. Cohort 1 contractors sampled 250 ECEAP children and families, and Cohort 2 contractors selected 156 ECEAP children and families. Cohort 1

and 2 contractors that expanded to more than 125 percent of their 1988-89 enrollment recruited additional children and families for Cohort 3. Cohort 3 contractors selected a sample of 952 ECEAP children and families, bringing the total Study sample to 1,358 ECEAP children and families.

The demographic characteristics of children and families in the ECEAP sample are described in the Year 3 Technical Report. The degree to which the ECEAP sample is representative of the entire ECEAP population is discussed in the Year 3 Technical Report.

The Comparison Sample

A Comparison group was constructed during the fall of 1991. ECEAP contractors recruited 322 children who were eligible for ECEAP, but who did not participate in a prekindergarten program, to be included in the Comparison sample. The goal was to recruit 450 children who were enrolled within the same schools as ECEAP children and who "matched" ECEAP children in terms of age, gender, ethnicity, primary language, and level of poverty (defined as eligibility for the free or reduced lunch program). The population from which to draw the Comparison sample was limited due to the difficulty and sensitivity of obtaining income eligibility information from families, and the reluctance of many eligible families to participate.

The Comparison sample is divided among the three cohorts so a direct comparison can be made to a sub-sample of ECEAP children in each cohort. Having a separate Comparison sample for each cohort of ECEAP children strengthens the interpretation of comparative analyses by eliminating any time-lapse effects that may confound data gathered at different points in time. Additionally, to minimize any effects on data due to variation among educational programs and experiences, Comparison children were recruited in schools where ECEAP children were enrolled. This strengthens the degree to which the Comparison sample is representative of the ECEAP sample and ECEAP population.

With assistance from school staff, ECEAP staff used a variety of strategies to identify and recruit Comparison families to participate in the Study. Letters (typically co-signed by the principal and/or classroom teachers) and Study information were sent home to families or attached to the school newsletter. Information was presented about the Study at parent meetings as well where ECEAP staff was available to discuss Study participation with interested families.

Children and families who met Comparison group criteria, and whose parents signed an informed consent form, were matched to ECEAP children enrolled in the school by their age, gender, ethnicity, and primary language. The ECEAP children then became part of the "matched" ECEAP sample for comparison purposes.

Data Collection

In all three cohorts, ECEAP children were assessed in the fall and spring of their ECEAP year, and may continue to be assessed each spring through



grade six and then again in their 9th and 12th grade year. The cohorts differ, however, in the timing of the Comparison sample construction. In addition, the Comparison children and the subset of ECEAP children to whom they were matched were assessed in the fall of 1991, the year of Comparison recruitment. More specifically:

- ♦ Cohort 1: A baseline comparison was made between a sub-sample of 77 Cohort 1 ECEAP children (i.e., the matched ECEAP sample) and a sample of 77 Comparison children at the beginning of their second grade year. In the spring of second grade, the Comparison children and the Cohort 1 ECEAP children were assessed.
- ♦ Cohort 2: A baseline comparison was made between a subsample of 62 Cohort 2 ECEAP children and 62 Comparison children at the beginning of their first grade year.
- ♦ Cohort 3: A baseline comparison was made between a subsample of 183 Cohort 3 ECEAP children and 183 Comparison children at the beginning of kindergarten.

Measures and Study Variables

The ECEAP Longitudinal Study design includes a variety of child and family variables to measure effects of the comprehensive prekindergarten and family assistance program. Data collection instruments were selected and/or developed to meet the following requirements:

- Address the central questions of the Study;
- Encompass the comprehensive nature of ECEAP's child and family intervention;
- Accommodate the considerable diversity among programs;
- Enable program staff to collect data accurately and with minimal disruption to their programs;
- Respect time and cooperation of participating families and maximize their retention in the Study; and
- Respect the impact on school district and school staff.

The initial set of instruments proposed for use during the ECEAP year was reviewed by ECEAP directors and staff. Follow-up measures used during the early elementary school years, developed after the first year's analysis, were also based on the criteria listed above. The resulting measures either directly assess the child, directly assess the parent and family, or solicit program and school staff ratings of child and family behaviors. A description and copies of the instruments used during the children's ECEAP year are in the Year 3 Technical Report. Measures used during year four to determine a baseline comparison between ECEAP and Comparison children in the fall, and then to follow-up all children in the spring, are described in the Year 4 Technical report.



Child Outcomes

Program staff used the **Parent Interview Form (PIF)** to gain parents' perspectives regarding their child's adjustment to school; their child's cognitive and physical development, including their child's development and progress compared to classmates; the types of special services or programs their child may have received; and occurrences of special recognition for good schoolwork and/or behavior, or contact from the school about problems with their child's schoolwork, grades, or attendance. In addition, families were asked several questions related to their child's health and nutrition, such as: types of health or development problems; ratings of health and nutrition status on a five-point scale from excellent to poor; occurrence of any accidents, injuries, serious illnesses, or major medical treatments; and the nature of visits to a doctor and dentist. Families were also asked to rate the adequacy of their family's health resources (medical and dental care), and indicate whether their family has health insurance.

During the child's seventh year of school, each child was asked to complete an **Adolescent Self-Report Survey (ASRS)**. The ASRS collected information on children's school activities, after-school activities, nutrition, and perceptions of school, teachers, and family relations.

Teachers provided information, using an instrument called the **Student Information Form** (**SIF**), about children's attendance records, classroom progress, and referral to/placement in special services or programs. To provide a sense of children's social and emotional well-being, teachers were also asked to rate each child's social and emotional behavior in the classroom using a **Student Behavior Inventory** (**SBI**) adapted from Shaefer, Hunter and Edgerton (1984). Teachers also provided information on children's schooling using a **School Archival Record Search** (**SARS**). Information collected via the SARS included attendance data, test scores (when relevant), grade retention, academic and behavioral referrals, and individual educational plans.

Family Outcomes

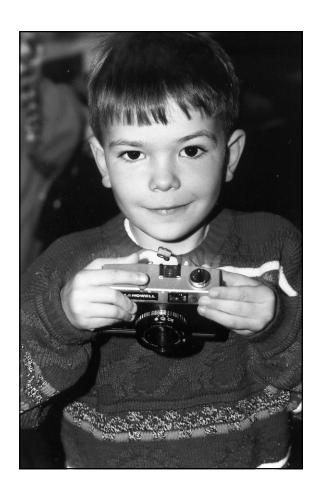
Variables related to family well-being and empowerment were divided into three general areas: family resources; parents' perceptions regarding their support for their child; and family participation in their child's education. Families were asked to rate the adequacy of their family resources (including housing, food, heat, and money for bills), provide information about their family's utilization of community services, and describe parents' current education and employment status.

Parents' perceptions regarding their support for their child were assessed through questions on the PIF about their educational expectations for their child, the types of activities they engage in with their child on a regular basis, and how they felt recently about, for example, their control over their child's education and the amount of time their family had to be together.

Both families and teachers were asked to rate the family's participation in a range of school-related activities and to indicate whether particular barriers to participation existed. Families were asked several questions during their

interview using the PIF, and teachers were asked to complete the **Family Participation in School Activities (FPSA)** form.

The measures and variables described above were analyzed with regard to socioeconomic status of Study participants, specifically related to receiving public assistance as an income source. The measures used during Year 9 of data collection included the APIF and ASRS for Cohort 1 children, and the FPSA, PIF, SBI, and SIF for Cohort 2 and 3 participants. During year 10, FPSA, PIF, SBI, and SIF measures were used to collect data from Cohort 3 families. Findings from these analyses are described in this report.



CHAPTER 3

CHARACTERISTICS OF STUDY PARTICIPANTS RECEIVING PUBLIC ASSISTANCE FROM YEAR 1 TO YEAR 10

Since 1988, data have been collected on three cohorts of ECEAP participants and their families. Beginning in 1991, data on three cohorts of Comparison children and families have been collected as well. During Year 9 of the ECEAP Longitudinal Study, participants were enrolled in grades 5, 6, and 7. This chapter will present findings from analysis of the data collected from Year 1 through Year 9 on Cohorts 1, 2, and 3 of ECEAP and Comparison group participants and Year 10 Cohort 3 participants with regard to socioeconomic status, specifically as it relates to receiving public assistance as an income source. Table 3.1 displays the data collection point, the time period, and the study year.

Table 3.1

Data Collection Time Point, Time Period, and Study Year

Time Point	Time Period	Study Year
Time 1	Fall 1988	ECEAP Year Fall- Cohort 1 only
Time 2	Spring 1989	ECEAP Year Spring
Time 3	Fall 1990	ECEAP Year Fall- Cohort 2 only
Time 4	Spring 1990	Year 2
Time 5	me 5 Fall 1991 ECEAP Y	
Time 6	Spring 1991	Year 3
Time 7	Spring 1992	Year 4
Time 8	Spring 1993	Year 5
Time 9	Spring 1994	Year 6
Time 10	Spring 1995	Year 7
Time 11	Spring 1996	Year 8
Time 12	Spring 1997	Year 9
Time 13	Spring 1998	Year 10 Cohort 3 only

Study Sample

A total of 1,358 ECEAP and Comparison group members initially participated in the Longitudinal Study. A total of 868 study participants remain after nine years of data collection. Table 3.2 displays the number ECEAP children and families participating in the Longitudinal Study since Year 1 and Table 3.3 displays the same information for the Comparison group members. In addition to the numbers of participants specified in Tables 3.2 and 3.3, there were an additional 34 participant families specified as an "alternate Comparison group." At Year 10 of data collection, 419 ECEAP group participants remained out of the original sample of 952; 87 Comparison group members remained at Year 10.

Table 3.2

Number of ECEAP Longitudinal Study Participants:
Year 1 through Year 9

_					Year				
	1	2	3	4	5	6	7	8	9
Number	196	352	1127	887	867	890	794	752	658

Table 3.3

Number of ECEAP Comparison Group Participants:
Year 4 through Year 9

		Year				
	4	5	6	7	8	9
Number	299	261	249	214	195	176

Study Sample Retention

The Gross Follow-Up Completion Rate (Ribisl, Walton, Mowbray, Luke, Davidson, and Bootsmiller, 1996) is calculated using the formula:

Number of Completed Follow-Up Interviews

Number of Completed Baseline Interviews

The Gross Follow-Up Completion Rate for Year 9 of the ECEAP Longitudinal Study was 49 percent for *ECEAP participants and families* (Year 9 completed follow-up interviews = 658/completed Baseline interviews = 1,355 = 49 percent completion rate). The rate for the *Comparison group* for Year 9 was 59 percent from Year 4, the point of entry for all Comparison group children and families, (completed Comparison group Baseline interviews = 299) to Year 9 (Year 9 completed Comparison group follow-up interviews = 176). Retention of Cohort 3 families at year 10 was 45 percent (Year 10 completed interviews/completed baseline interviews = 929).



Findings of a meta-analysis of 85 studies indicated the length of the follow-up period explained less than 5 percent of the variability in attrition rates (Hansen, Tobler, and Graham, 1990). In other words, the length of the follow-up period had a relatively small influence on the amount of attrition experienced in a study.

Retention and attrition of ECEAP Longitudinal Study participants is complicated by a number of factors related to the nature of the population and the Study design. The Study is following three cohorts of ECEAP enrollees and a comparison group of families over a period of 16 years. Tracking families from year to year can be problematic for a variety of reasons. Some of the more frequent occurrences that arise when tracking families are families moving in and out of geographic locations, changing residences and telephone service within a particular geographic location, and choosing not to participate during a particular year.

Characteristics of ECEAP Study Participants Receiving Public Assistance The characteristics of the Study participants receiving public assistance are described below. Data from Study enrollment and the most recently available year of data collection (1996-97 for Year 9 and 1997-1998 for year 10) were used in the analyses. Enrollment data provides baseline information from which to measure change. Data from Year 9 (1996-97) provides the most recent information available on income status for all 3 Cohorts. With public assistance reform legislation being implemented during 1996, an analysis of the data available from 1996 may be viewed as a second baseline from which future change can be assessed with regard to the possible impact of these initiatives. Likewise, data collected from 1996-1997 on Cohort 3 participants can be used as a comparison against 1997-1998 data on changes related to public assistance. As income data becomes available from subsequent data collection cycles, further analysis may be conducted to assess the possible impact of public assistance reform efforts on this population.

Poverty Status of ECEAP Study Participants

ECEAP Study participants are asked to report their annual income and the number of individuals supported by this income each year of the Longitudinal Study during the Parent Interview. This data provides the basis from which poverty status is calculated based on the Washington need standard for a family of four. For example, during 1998, the need standard for a family of four in the state of Washington was \$16,450 per year.

Poverty status was calculated for all Study participants reporting income data for a particular year. Nearly all of the ECEAP group participants were at or below poverty level at the time of enrollment in ECEAP. Since ECEAP targets services to children considered at risk of school failure due to neglect, abuse, or disabling conditions regardless of family income, not all ECEAP enrollees were at or below the poverty level. Slightly over half of the Comparison group participants were at or below the poverty level at the time of study enrollment (Year 4). Table 3.4 displays the poverty status rates for both the ECEAP and Comparison group members at the time of ECEAP and Study enrollment.

Table 3.4

Poverty Status at Enrollment for ECEAP Study Participants

	ECEAP Group (N = 1,247) ¹			son Group 289) ²
Poverty Status	Ν	%	N	%
Above poverty level	64	5	135	47
At or Below poverty level	1,183	95	154	53
Total	1,247	100	289	100

Analysis of the Year 9 data shows a decline in the poverty status since enrollment in the ECEAP Longitudinal Study. Table 3.5 displays poverty status rates for both the ECEAP and Comparison group members for Year 9 of the Study.

Table 3.5

Poverty Status at Year 9 for ECEAP Study Participants

	ECEAP Group (N = 613)		Comparison Group (N = 170)		
Poverty Status	Ν	%	N	%	
Above poverty level	350	5 <i>7</i>	115	68	
At or Below poverty level	263	43	55	32	
Total	613	100	170	100	

Table 3.5 shows that fewer than 50 percent of the Year 9 ECEAP group Study participants are at or below poverty level. This is a major a shift in poverty status since enrollment for ECEAP group participants with 52 percent fewer ECEAP group participants at or below poverty level during Year 9 than at the time of enrollment (see Table 3.4). There was a shift in poverty status for the Comparison group participants since enrollment into the Study with 21 percent fewer Comparison group participants at or below poverty level during Year 9 (see Table 3.4).

The decline in the percentage of ECEAP families in poverty continued to decrease over time as is evidenced by Year 10 data. Sixty–four percent of the Cohort 3 ECEAP group participants were above the poverty level, whereas 82 percent of the Comparison group participants was above the same poverty level.

² Comparison group members were NOT enrolled in ECEAP and enrolled in the Longitudinal Study during Year 4.



¹ ECEAP group members enrolled in ECEAP and the Longitudinal Study during Years 1, 2, and 3.

Table 3.6 displays the group membership of the ECEAP Longitudinal Study participants determined to be at or below poverty level at enrollment and during Year 9.

Table 3.6

ECEAP Study Participants At or Below Poverty Level by Group Membership at Enrollment (N = 1,337) and Year 9 (N = 318)

	Enrollment At or Below Poverty Level			Below Poverty evel
Group	N	%	N	%
ECEAP	1,183	88	263	83
Comparison	154	12	55	17
Total	1,337	100	318	100

Table 3.6 shows that at enrollment, for the Study participants who were at or below poverty level, 88 percent were from the ECEAP group and 12 percent were from the Comparison group. At Year 9, 83 percent were in the ECEAP group and 17 percent were in the Comparison group. The percent of participants at or below the poverty level must be compared to the percent of participants in the ECEAP and Comparison group in the entire Study sample. During Year 9, 79 percent of the Study participants were in the ECEAP group and 21 percent were in the Comparison group. During Year 10, Cohort 3 ECEAP group participants made up 91 percent of those families in poverty while only representing 83 percent of the Study sample in 1997-1998. Of 405 ECEAP group participants at Year 10, 146 reported having an annual income of less than the federal poverty level; 15 of 85 Comparison group members reported being in poverty.

The ECEAP group members have historically had a larger percent of members at or below poverty level (see Tables 3.4 and 3.5) since this group has historically had a lower annual income than have the Comparison group members. The ECEAP group members have had lower annual incomes than the Comparison group members every year since the Comparison group entered the Longitudinal Study in Year 4. Even among those Study participants at or below poverty level, ECEAP group members have had the lowest incomes. Therefore, it is not surprising to find a greater percent of the ECEAP group members at or below poverty level than are Comparison group members. Table 3.7 displays the mean and median annual incomes at Study enrollment for those at or below poverty level.

Table 3.7

Annual Household Income at Enrollment³ for ECEAP Study Participants

At or Below Poverty Level

Group	Mean Income	Median Income⁴
ECEAP ⁵	\$ <i>7,</i> 651	\$ 7,044
Comparison ⁶	10,714	10,000

The ECEAP group participants continue to have a lower median annual income. The annual median income for the all Study participants only increased by approximately 50 dollars from Year 8 to Year 9 of the Longitudinal Study. Table 3.8 displays the mean and median annual income for Year 9 ECEAP and Comparison group members who are at or below poverty level.

Table 3.8

Annual Household Income of Year 9 ECEAP and Comparison Group Participants

At or Below Poverty Level (N = 318)

Group	Mean Income	Median Income ⁷		
ECEAP	\$11,522	\$10,800		
Comparison	13,943	13,000		

The median annual income may provide a more accurate assessment of annual income. The mean, or average, can be affected by extreme high or low values therefore providing an erroneous impression of the data. The median, on the other hand, is unaffected by the size of the few extreme values within the data since it is the midpoint at which half the cases fall above and half fall below.

The annual mean and median incomes of Cohort 3 ECEAP group participants in poverty at Year 10 was \$12,413 and \$11,140 respectively. Comparison group members had higher mean incomes (\$14,970) and median incomes (\$15,000) than the ECEAP group.

Income Sources of ECEAP Study Participants At or Below Poverty Level The ECEAP Longitudinal Study participants are asked to report the sources of their income each year during the Parent Interview. Respondents may report more than one source of income since it is possible to derive income from multiple sources. At enrollment, ECEAP Study participants had slightly over one income source. The Year 9 ECEAP Study participants had a mean of nearly one and a half income sources. The most noticeable increases in the mean income sources were found in those at or below the poverty level.

⁷ See Footnote 4.



³ See Footnotes 1 and 2.

⁴ The point on the scale where half of the scores are larger than the median, and half are smaller.

⁵ See Footnote 1.

⁶ See Footnote 2.

The only group to experience a decrease in mean income sources was the Comparison group members who were above the poverty level; they relied almost exclusively on wages as their primary source of income.

It was of interest to determine the number and types of income sources for the ECEAP Longitudinal Study participants who were determined to be at or below poverty level. The number of income sources for the ECEAP and Comparison group participants at or below the poverty level at enrollment and Year 9 are displayed in Table 3.9.

Table 3.9

Number and Percent of Income Sources of Year 9 ECEAP and Comparison Group
Participants At or Below Poverty Level

	Enrollment (N = 1,337)			Year 9 (N = 404)				
	ECEAP		Comparison		ECEAP		Comparison	
Number of Income Sources	N	%	N	%	N	%	N	%
0	32	3	8	5	2	1	0	0
1	968	82	101	66	197	56	21	38
2	173	15	40	26	129	37	31	56
3	9	1	5	3	19	5	3	6
4	1	<1	0	0	2	1	0	0
Total	1,183	100	154	100	349	100	55	100

As can be seen from Table 3.9 above, most ECEAP group members and approximately two-thirds of the Comparison group members had one income source at Study enrollment. There was an increase in multiple sources of income from enrollment to Year 9. Approximately 16 percent of the ECEAP group participants had two or more sources of income at enrollment; 43 percent of ECEAP group members had two or more sources of income during Year 9. Twenty-nine percent of the Comparison group members had two or more sources of income at enrollment while 62 percent had multiple income sources during Year 9.

Year 10 data on number of income sources by group participation was somewhat different than Year 9 data. Although 49 percent of the ECEAP group participants reported having more than one income source, only 33 percent of the Comparison families reported having multiple income sources.

It would be expected that the majority of the participants who were at or below poverty level would receive public assistance as a source of income. Two-thirds of the ECEAP group participants received public assistance at enrollment that left them at or below the poverty level. Interestingly, not even half of the Study participants at or below poverty level received public assistance as a source of income during Year 9. Slightly under one-fourth of all Study participants (N = 205 or 24 percent) received public assistance as an income source during Year 9 regardless of poverty status. These data are very similar to those reported in the Year 8 Report, and are very similar to the Year 10 data for the Cohort 3 Study participants.

The sources of income are queried each year of the ECEAP Longitudinal Study during the Parent Interview. Table 3.10 displays the sources of income for those found at or below poverty level during Year 9 of the Study. Since participants may have multiple income sources, the totals in Table 3.10 will be greater than the total number of participants at or below poverty level for each year.

Table 3.10

Sources of Income of ECEAP Longitudinal Study Participants At or Below Poverty Level at Enrollment (N = 1,337) and Year 9 (N = 318)

	Number				
	Enrol	lment	Year 9		
Source of Income	N %		Ν	%	
Wages	426	36	187	59	
Public Assistance	774	65	157	49	
Social Security	46	4	56	18	
Child Support	70	6	52	16	
Unemployment Compensation	24	2	39	12	
Pension	5	<1	2	<1	
Other Income			24	8	

Year 10 was very similar to the data reported above. Sixty-four percent of the study participants received wages as a source of income, while 48 percent received public assistance and 17 percent received social security. The two largest income categories at enrollment and Year 9 and Year 10 were wages and public assistance. The least utilized income category at both time periods was pensions since most of the families in the ECEAP Longitudinal Study are not of an age where retirement and pension income would be accessible. The most notable shifts from enrollment through Years 9 and 10 were the decrease in public assistance as an income source and the increase of wages.



It was of interest to determine if those at or below the poverty level who received public assistance as a source of income had additional sources of income other than public assistance. Table 3.11 presents the findings from the analysis of additional income sources for those receiving public assistance and were at or below the poverty level.

Table 3.11

Number and Percent of Income Sources In Addition To Public Assistance of ECEAP and Comparison Group Participants At or Below the Poverty Level Receiving Public Assistance at Enrollment (N = 774) and Year 9 (N = 157)

	Enro	ollment	Year 9		
Number of Income Sources	N	%	N	%	
0	629	81	70	45	
1	136	18	68	43	
2	8	1	17	11	
3	1	<1	2	1	
Total	774	100	15 <i>7</i>	100	

Analysis of the data reported in Table 3.11 found that 145 (19 percent) participants who received public assistance and were at or below the poverty level at enrollment also had additional sources of income. At Year 9, 87 (55 percent) of the Study participants who received public assistance and were at or below the poverty level also had additional sources of income. There was a 36 percent shift in the number of Study participants with other sources of income in addition to public assistance from enrollment to Year 9. Seventy percent of Cohort 3 families who received public assistance reported at year 10 as having additional sources of income, which was an increase of nearly 50 percent from time of enrollment.

The types of income sources in addition to public assistance for the ECEAP Longitudinal Study participants at enrollment and Year 9 and 10 who were at or below the poverty level and received public assistance consisted mainly of wages and social support.

Family Environment of ECEAP Study Participants

Characteristics of the family environment are assessed each year during the Parent Interview. Characteristics such as current family living situation, marital status, employment status, and family resources are reported by the Study respondents.

Living Situation. ECEAP Longitudinal Study respondents are asked to identify the current living situation of the ECEAP Study child. Categories include the child living with both parents, with one parent only, with a

parent and a step-parent, with relatives, foster parents, with one parent and the parents' partner, or some other configuration. Table 3.12 reports the living situations for the children in the Study whose families were receiving public assistance as an income source.

Table 3.12

Family Living Situations of ECEAP Longitudinal Study Children Receiving Public Assistance at Enrollment (N = 857) and Year 9 (N = 205)

_	Enrollment		Yea	ar 9
Living Situation	Ν	%	Ν	%
Both Parents	178	21	40	20
Mother Only	624	73	108	53
Mother and Stepfather	6	1	11	5
Father Only	13	2	9	4
Father and Stepmother	1	< 1	2	1
Grandparents or Relatives	22	3	12	6
Foster Parents	3	<1	0	0
Mother and Partner ⁸			20	10
Father and Partner ⁹			2	1
Joint Custody ¹⁰			0	0
Other	3	<1	1	< 1
Missing	7	1	0	0
Total	857	100	205	100

The most notable shift in the living situations of the Study children who lived in families receiving public assistance was a decrease in those living with mother only. There were 20 percent fewer children living with their mother only during Year 9 than at enrollment. Families who received public assistance during Year 10 of the Study reported similar living arrangements as in the previous year. The only noticeable change was more children living with grandparents (almost 10% of the families). Comparisons cannot be made with regard to changes in children living with mother or father and partner and those in joint custody situations since these categories were not used at the time of study enrollment. However, a living arrangement that has increased in frequency over the past years is mother living with a partner.

¹⁰ See Footnote 8.



⁸ This category was not used at enrollment.

⁹ See Footnote 8.

It was of interest to examine the data regarding family living situation in light of those whom do and do not receive public assistance. During Year 9 and 10, those children living with mother only or grandparents or other relatives represent the highest percentage of living in households where public assistance is an income source. Approximately 60 percent of all the children living in these situations during Year's 9 and 10 lived in a household that received public assistance. The children living in households where there were two adults present (both parents and parent and step-parent) reported the lowest percentage of family situations where public assistance was an income source.

Parental Employment Status. Parental employment status is reported during the Parent Interview each year. Employment status impacts receipt of public assistance as an income source since those who are employed, either full-or part time, have a lower utilization of this source of income. Table 3.13 displays parental employment status for those who receive public assistance.

Table 3.13

Parental Employment Status of Year 9 ECEAP Longitudinal Study Participants
Receiving Public Assistance as an Income Source

_		Employment (N = 189)	Father's Employment Status (N = 81)		
Employment Status	N Percent		Ν	Percent	
Full-Time	24	13	35	43	
Part-Time	30	16	11	14	
Unemployed	67	35	21	26	
Disabled	12	6	6	7	
Retired	2	1	4	5	
Homemaker	42	22	0	0	
Other	12	6	4	5	
Total	189	100	81	100	

When children who lived with mothers or fathers who received public assistance were compared to those children who lived with mothers or fathers who did not receive this source of income, over 90 percent of parents who did not receive public assistance worked full or part time. Cohort 3 data from Year 10 indicate a similar pattern. For those families receiving public assistance, 30 percent of the female caregivers are unemployed and 16 percent of the male primary caregivers are unemployed. Children living in families not receiving public assistance, 36 percent of the primary female caregivers are working full or part time and 85 percent of the male caregivers are working.

Family Resources. Parents were asked during the Parent Interview to rate the adequacy of their resources. The Family Resource Adequacy Index (FRAI) contains 16 items and is rated on a scale of one ("not at all adequate") to 5 ("almost always adequate"). Items in the FRAI included having food for two meals a day, money to pay monthly bills, medical care for the family, dependable transportation, etc. All items from the FRAI were scaled to give a global rating of the adequacy of resources available to the family. Table 3.14 displays the FRAI scores.

Table 3.14a

Family Resource Adequacy Index Mean Scores for Year 9 ECEAP

Longitudinal Study Participants

	Mean Scale Score		
Not Receiving Public Assistance	4.13		
Receiving Public Assistance	3.86		

The difference between the FRAI scale score for those receiving and not receiving public assistance for Year 9 was statistically significant. This means that receiving public assistance was related to the overall resource adequacy score. Those that received public assistance reported less adequate resources than those who did not receive public assistance and this was not due to chance alone.

Table 3.14b shows the mean differences in the adequacy of resources for those families in Cohort 3 during the 1997-1998 school year. The mean differences are significantly different, with families receiving public assistance reporting that the adequacy of their resources are lower than families who are not receiving public assistance.

Table 3.14b

Family Resource Adequacy Index Mean Scores for Year 10 ECEAP

Longitudinal Study Participants

	Mean Scale Score
Not Receiving Public Assistance	4.15
Receiving Public Assistance	3.81

Significant Events. Parents were asked to indicate which, if any, significant events occurred during the past year that impacted the family. Events included in this item were moving, housing problems, accidents, alcohol and drug problems, and so on. Forty-six percent of the Year 9 ECEAP



Longitudinal Study participants reported having an event during the past year that impacted their family. No differences were found between families reporting a significant event in their life related to whether they received public assistance or not. No differences were found at Year 10 between families who did and did not receive public assistance on reports of significant events impacting their family.

Health and Well-Being of ECEAP Study Participants The health and well-being of Study participant families was assessed in the Parent Interview. Aspects of the child's and family's health and nutrition practices were surveyed on an eight-item scale. In addition, medical and dental service use was examined as well as the existence of health insurance coverage to pay for such visits. Parental well-being was examined using an elevenitem well-being scale. Each of these scales and items will be reported below.

Health and Nutrition. An eight-item survey was used to examine aspects of the child's and family's health and nutrition. Each item was rated by parents during the Parent Interview using a five point scale, with 1 equal to poor and 5 equal to excellent. Table 3.15 displays the mean scores of each of the items in the scale for those receiving public assistance and those not receiving public assistance.

Table 3.15a

Mean Scores of Parental Reports of Child and Family Health and Nutrition for Year 9

ECEAP Longitudinal Study Participants (N = 740)

_	Not Receiving Public Assistance (N = 555)	Receiving Public Assistance (N = 185)
Item	Ν	N
Child's Overall Health	4.19	4.08
Parent's Knowledge About Child's Health	4.28	4.27
Health Care Child Receives	4.13	4.08
Health Care Family Receives	4.21	4.29
Child's Hygiene Habits	3.65	3.66
Child's Eating Habits	3.72	3.76
Parent's Knowledge of Nutrition	4.10	4.10
Family's Overall Nutrition	4.16	4.25

There was no statistically significant difference between the mean scores of each item for those receiving public assistance and those not receiving public assistance.



One difference was found between families receiving public assistance and those that did not during Year 10 of the Study. Families who did not receive public assistance rated their children as having better overall health than did participants who received public assistance. Table 3.15b reveals the mean ratings for each of the groups on health and nutrition questions.

Table 3.15b

Mean Scores of Parental Reports of Child and Family Health and Nutrition for Year 10

ECEAP Longitudinal Study Participants (N = 520)

	Not Receiving Public Assistance (N = 427)	Receiving Public Assistance (N = 93)
Item	Ν	N
Child's Overall Health	4.33	4.09
Parent's Knowledge About Child's Health	4.37	4.32
Health Care Child Receives	4.33	4.14
Health Care Family Receives	4.15	4.01
Child's Hygiene Habits	3.73	3.62
Child's Eating Habits	3.71	3.72
Parent's Knowledge of Nutrition	4.22	4.20
Family's Overall Nutrition	4.10	4.04

Children's Health. Parents were asked to indicate any health problems their child may have been experiencing. The types of problems that were examined were weight, height, vision, hearing, dental, allergy, nutrition, other medical, speech, behavior, handicap or disability, and other developmental problems. In addition, parents were asked if the health problem caused missed school time or the child to perform poorly in school. Table 3.16a shows the number and percent of parents reporting current health problems for their child during Year 9 and Table 3.16b reports data from Year 10.

Table 3.16a

Number and Percent of Parent Reported Health Problems for Year 9 ECEAP Longitudinal Study Participants (N = 834)

(Table at top of facing page)



	Number & Percent of Total Reporting Problem (N=834)		Number & Percent of Those Reporting Problem Not Receiving Public Assistance		Number & Percent of Those Reporting Problem Receiving Public Assistance	
Health Problem	N	%	N	%	Ν	%
Vision	128	15	101	79	27	21
Hearing	16	2	10	62	6	38
Dental	85	10	60	71	25	29
Allergy	118	14	83	70	35	30
Nutrition	1 <i>7</i>	2	16	94	1	6
Other Medical	87	10	55	63	32	37
Speech	27	3	17	63	10	37
Behavior	88	11	53	60	35	40
Handicap/Disability	16	2	11	69	5	31
Other Developmental	25	3	17	68	8	32

Table 3.16b Number and Percent of Parent Reported Health Problems for Year 10 ECEAP Longitudinal Study Participants (N=525)

	Number & Percent of Total Reporting Problem (N = 525)		Number & Percent of Those Reporting Problem Not Receiving Public Assistance		Number & Percent of Those Reporting Problem Receiving Public Assistance	
Health Problem	Ν	%	N	%	N	%
Vision	98	19	81	83	17	17
Hearing	12	3	9	75	3	25
Dental	64	12	54	84	10	16
Allergy	100	19	80	80	20	20
Nutrition	19	4	12	63	7	37
Other Medical	51	10	33	65	18	35
Speech	11	2	6	55	5	45
Behavior	63	12	47	<i>7</i> 5	16	25
Handicap/Disability	14	3	12	86	2	14
Other Developmental	23	4	17	74	6	26

As is evident from Table 3.16, the most prevalent types of health problems reported by parents were vision, behavior, allergy, and other medical problems. The least prevalent type of health problem reported by parents was nutrition. No statistically significant differences were found for any of the health variables.

Parents were also asked during the Parent Interview if their child had experienced a serious illness, major medical treatment or an injury or accident during the past year. Overall, 76 of the children (10 percent) in the Study during Year 9 experienced one or more of these conditions; 20 of those Study participants who did not receive public assistance experienced such conditions and 56 of those who received public assistance reported similarly. Year 10 data are consistent with the previous years results; 12 percent of all the children in the Longitudinal study experienced a serious injury, major medical treatment, or an injury or accident during the past year.

Medical Service Use. Parents were asked to provide information on the ways in which their child used medical services during the past year. Parents were asked to provide information on use of such medical services as physical exams, check-ups, immunizations, and treatment of illness or injury. Seventynine percent of those children who lived in families not receiving public assistance were seen by a doctor during Year 9; 84 percent of children in families receiving public assistance were seen by a doctor. Statistically significant differences (p < 0.05) emerged between those families receiving public assistance versus those not receiving public assistance on the use of medical services. Specifically, those who received public assistance took their child to be seen by a doctor more frequently than those who did not receive public assistance and this difference was not due to chance alone. Significant differences were also found at Year 10 of the Study between children who lived with families not receiving public assistance versus those children living with families receiving public assistance. Ninety-four percent of the children living with families receiving public assistance had seen a doctor more often than did children in families not receiving public assistance (85 percent).

Table 3.17a

Number and Percent of Reasons Children Saw a Doctor for Year 9 ECEAP

Longitudinal Study Participants (N = 554)

_	Not Receiving Public Assistance (N = 425)		Receivin Assistance	•
Reason	Ν	%	Ν	%
Physical Exam	215	51	76	59
Illness	197	46	59	26
Injury	44	10	19	15
Immunization	68	16	15	12
Other Reason	34	8	15	12

Table 3.17b

Number and Percent of Reasons Children Saw a Doctor for Year 10 ECEAP

Longitudinal Study Participants (N = 519)

	Not Receiving Public Assistance (N = 426)		Receivin Assistance	•
Reason	Ν	%	N	%
Physical Exam	250	58	66	71
Illness	143	34	40	43
Injury	52	12	13	14
Immunization	182	43	39	42
Other Reason	41	10	26	28

Tables 3.17a and 3.17b display the numbers and percents of reasons children saw a doctor during the past year.

Utilization of Dental Services. Parents were asked to indicate the types of dental services their child received during the past year. Response categories included teeth cleaning or check-up, fillings, and other types of dental services. Over 90 percent of the Year 9 ECEAP Longitudinal Study children had been seen by a dentist during the past year; 93 percent of those children who lived in families who did not receive public assistance were seen by a dentist in the past year and 97 percent of those who lived in families who did receive public assistance visited a dentist during the past year. At Year 10, 71 percent of those children who lived in families who did not receive public assistance had seen a dentist in the past year compared to 81 percent of the children whose families did not receive public assistance. For both data collection points, the primary reason for a child seeing a dentist was teeth cleaning and exams and getting teeth filled. No differences emerged between the groups at either Year 9 or Year 10 on reasons for seeing a dentist.

Health Insurance Coverage. Parents were asked to indicate if their child was covered by health insurance, as well as what kind of health insurance was utilized by the family to cover the child. Ninety-one percent of the children in the ECEAP Longitudinal Study were covered by some form of health insurance during 1996-1997. For those children living in families who did not receive public assistance, 88 percent were covered by health insurance; 98 percent of the children living in families receiving public assistance were covered by health insurance. This difference in health insurance coverage between the two groups was statistically significant (p < 0.05) and was not due to chance alone. Families receiving public assistance had a greater incidence of being covered by health insurance than families not receiving public assistance.

Some form of health insurance covered ninety-three percent of the children during Year 10 of the ECEAP Longitudinal Study. For those children living in families who did not receive public assistance, 92 percent were covered by health insurance; 97 percent of the children living in families receiving public assistance were covered by health insurance. No significant differences were found between the groups on having health insurance, an important factor for families accessing health care.

Table 3.20a details the number and percent of children covered by the various types of health insurance.

Table 3.18a

Number and Percent of Children Covered by Health Insurance for Year 9

ECEAP Longitudinal Study Participants (N = 645)

	Number & Percent Within Type of Insurance Not Receiving Public Assistance (N = 466)		Number & Within 1 Insurance Public As (N=1	Type of Receiving sistance
Type of Insurance	Ν	%	Ν	%
Employer Paid	178	38	6	3
Medicaid/Coupons	148	32	157	88
Medicare	3	1	2	1
Basic Health Plan	58	12	8	4
Family Paid	19	4	1	1
Combination Employee/ Employer Paid	42	9	1	1
Other	18	4	4	2

The most prevalent type of insurance coverage for the entire group was Medicaid/coupons and employer paid health insurance coverage. The least used type of health insurance coverage was Medicare and is no doubt due to the age of the population under study. There was a statistically significant (p < 0.05) difference found for four of the types of health insurance coverage: employer paid, Medicaid/coupons, Basic Health Plan, and family paid. Those families who did not receive public assistance reported more employer paid, Basic Health Plan, and family paid health coverage than those receiving public assistance. Those who did receive public assistance reported more Medicaid/coupon coverage than those who did not receive public assistance. This finding was consistent with

Year 8 results. Similarly, Year 10 findings reflected the same significant differences between families receiving public assistance and those who did not receive public assistance. Table 3.18b displays the results of types of health insurance received by participants at Year 10

Table 3.18b

Number and Percent of Children Covered by Health Insurance for Year 10

ECEAP Longitudinal Study Participants (N = 512)

	Number & Percent Within Type of Insurance Not Receiving Public Assistance (N = 416)		Number & Within 1 Insurance Public As (N=	Type of Receiving sistance
Type of Insurance	Ν	%	Ν	%
Employer Paid	122	29	2	2
Medicaid/Coupons	130	31	76	79
Medicare	6	1	2	2
Basic Health Plan	54	13	5	5
Family Paid	18	4	0	0
Combination Employee/ Employer Paid	61	15	3	3
Other	25	6	8	8

Parental Well-Being. Parents were asked to rate aspects of their well-being on an eleven-item index. Areas that were rated were time to be with their child, time for the family to be together, time for self, ability to control their future, feeling depressed, understanding of their child's needs, and the like. The response categories ranged from 1 ("never") to 5 ("quite often"). Table 3.19a displays the mean score for each of the items in the index for Year 9 Study members. Table 3.19b documents the mean scores for Year 10 participants.

Table 3.19a

Mean Scores for Parent Self-Report of Personal Well-Being for Year 9 ECEAP

Longitudinal Study Participants (N = 708)

	Not Receiving Public Assistance (N = 523)	Receiving Public Assistance (N = 185)
Item	Mean Score	Mean Score
Time to be With Child	3.55	3.25
Family Had Time to be Together	3.53	3.24
Time to be by Self When Needed	2.88	2.91
Time to be With Friends	2.85	3.00
Life is Going Great	3.34	3.05
Feeling Blue or Depressed	2.56	2.97
Feeling in Control of Own Future	3.41	3.05
Feeling Trapped by Responsibilities	2.26	2.76
Don't Understand Child's Needs	2.53	2.81
Don't Have Skills to Help Child	2.42	2.89
Control Over Child's Education	3.45	3.22

Table 3.19b

Mean Scores for Parent Self-Report of Personal Well-Being for Year 10 ECEAP

Longitudinal Study Participants (N = 521)

	Not Receiving Public Assistance (N = 428)	Receiving Public Assistance (N = 93)
Item	Mean Score	Mean Score
Time to be With Child	4.02	4.10
Family Had Time to be Together	3.93	4.14
Time to be by Self When Needed	2.96	2.70
Time to be With Friends	2.86	2.80
Life is Going Great	3.55	3.06
Feeling Blue or Depressed	2.15	2.66
Feeling in Control of Own Future	3.75	3.49
Feeling Trapped by Responsibilities	1.76	2.00
Don't Understand Child's Needs	2.27	2.38
Don't Have Skills to Help Child	2.12	2.35
Control Over Child's Education	3.76	3.73

Significant differences (p < 0.05) emerged on four of the questions for Year 9 responses. Families not receiving public assistance reported having more time for their children and families than did families who received public assistance. In addition, families who received public assistance reported feeling more depressed and lacking in skills to help their children than did families who received no public assistance. Since 1996, however, respondents are feeling like they are having less time to spend with their children and family.

Three questions of well-being revealed significant differences (p < 0.05) between families who received public assistance and those who did not in Year 10. Those families who did not receive public assistance felt life was going better, that they were less depressed, and they felt more in control of their future than did those families who were receiving public assistance.

Items from this index were scaled to give two global ratings of parental well-being. Seven of the items are considered to be positively oriented and the remaining four are negatively oriented. These items were scaled in order to obtain a global rating of the negative and positive aspects of well-being. Tables 3.20a and 3.20b show the means scores for both the positive and negative oriented items of the index.

Table 3.20a

Mean Scale Scores for Parent Self-Report of Personal Well-Being for Year 9

ECEAP Longitudinal Study Participants (N = 708)

	Not Receiving Public Assistance (N = 523)	Receiving Public Assistance (N = 185)
Scale Orientation	Mean Score	Mean Score
Positive Scaled Items	3.31	3.10
Negative Scaled Items	2.44	2.87

The positive scaled items global score is near the midpoint between "sometimes" and "often". The negative scaled items global score is considered to be "once in a while". In other words. For any of the positive items, such as feeling in control of the future, participants averaged a score between "sometimes" and "often". Likewise, for a negative item, such as feeling blue or depressed, participants averaged a score of "once in a while". The differences in both the positive and negative scale score were statistically significant (p < 0.05); families who received public assistance had lower positive mean scores and higher negative mean scores and this was not due to chance alone.

Table 3.20b

Mean Scale Scores for Parent Self-Report of Personal Well-Being for Year 10 ECEAP Longitudinal Study Participants (N = 521)

	Not Receiving Public Assistance (N = 428)	Receiving Public Assistance (N = 93)
Scale Orientation	Mean Score	Mean Score
Positive Scaled Items	3.50	3.43
Negative Scaled Items	2.08	2.34

The differences in the negative scale score was statistically significant (p < 0.05); families who received public assistance had lower higher negative mean scores compared to those families who did not receive public assistance. These differences were not due to chance alone.

Educational Progress

Parents and teachers were asked to rate the educational progress of the ECEAP Longitudinal Study children. Several individual variables and instruments were used to assess children's educational progress to include adjustment to and enjoyment of school, referrals to special school services, parental participation in school activities, educational expectations, and the like. These indicators will be analyzed and reported on below.

Enjoyment of School. Parents were asked to assess the level of their child's enjoyment of school. The level of enjoyment was reported using a four-point scale of "a lot", "a little", and "very little" enjoyment, and "can't tell" how much the child is enjoying school. At Year 9, the mean score for children in families not receiving public assistance was 3.60; the mean score for those children in families who did receive public assistance was 3.49. Year 10 data shows the mean scores for families not receiving public assistance equaling 3.53 and those families receiving public assistance having a mean score of 3.34. All these scores are slightly below "a lot" of enjoyment of school. A statistically significant difference (p < 0.05) was found between the mean scores of school enjoyment for those who did and did not receive public assistance during Year 10. Those families who did not receive public assistance reported that their children enjoyed school more than did those families who received public assistance.

Adjustment to School. Parents were asked to indicate the level of their child's adjustment to school. A three-point scale was used to assess this variable. The scale consisted of "no problems", "some problems", and "many problems". Year 9 results show the mean score for children in families not receiving public assistance was 2.73; the mean score for children in families who did receive public assistance was 2.73. These slight differences in mean scores were not significantly different. These scores are between "some problems" and "no problems" with adjustment

to school. There were no differences at Year 10 as well. The mean score for families who did not receive public assistance was 2.51 and the mean score for families who received public assistance was 2.39.

Parental Reports of Children's Academic Progress. Parents were asked to rate their perception of their child's academic progress in school compared to their perception of other similarly aged children. A five-point scale was used of "well above average", "above average", "average", "somewhat below average", and "well below average". Items on this index included overall academic progress, motivation to do well, maturity, confidence, self-esteem, and behavior. The mean scores for each item at Year 9 and 10 are reported in Tables 3.21a. and Table 3.21b.

Table 3.21a

Mean Scores for Parental Perceptions of Academic Progress Items for Year 9

ECEAP Longitudinal Study Participants (N = 715)

	Not Receiving Public Assistance (N = 530)	Receiving Public Assistance (N = 185)
Item	Mean Score	Mean Score
Academic Progress	3.50	3.30
Language Progress	3.57	3.46
Reading Progress	3.53	3.35
Math Progress	3.46	3.25
Motivation	3.51	3.41
Sociable	3.93	3.90
Mature	3.52	3.52
Well-Behaved	3.60	3.35
Confident	3.36	3.31
Self-Esteem	3.36	3.31
Motor Skills	3.74	3.79

Several statistically significant differences (p < 0.05) were found between academic progress scores for children living with families who do and do not receive public assistance. Those families that did not receive public assistance rated their children as progressing better academically, reading better, doing better in math, and being better behaved compared to children whose families received public assistance.

Table 3.21b

Mean Scores for Parental Perceptions of Academic Progress Items for Year 10

ECEAP Longitudinal Study Participants (N = 521)

	Not Receiving Public Assistance (N = 428)	Receiving Public Assistance (N = 93)
Item	Mean Score	Mean Score
Academic Progress	3.44	2.37
Language Progress	3.49	3.44
Reading Progress	3.43	3.34
Math Progress	3.31	3.38
Motivation	3.45	3.30
Sociable	4.01	3.75
Mature	3.52	3.38
Well-Behaved	3.59	3.40
Confident	3.46	3.23
Self-Esteem	3.38	3.09
Motor Skills	3.78	3.76

Two statistically significant differences (p < 0.05) were found between academic progress scores for children living with families who do and do not receive public assistance. Those families that did not receive public assistance rated their children as being more sociable and having higher selfesteem compared to children whose families received public assistance.

Teacher Reports of Children's Academic Progress. Teachers were asked to report their assessment of the Study children's mid-year progress on six dimensions. Three of the six dimensions corresponded to the areas parents were asked to rate and were: language, reading, and math progress. The remaining three dimensions teachers assessed were homework assignments, in class assignments, and participation in classroom activities. A five-point scale was used and consisted of "well below average", "somewhat below average", "average", "somewhat above average", and "well above average". The mean scores of each item are reported for Year 9 in Table 3.22 below.

Table 3.22

Mean Scores for Teacher Assessment of Mid-Year Progress Items for Year 9

ECEAP Longitudinal Study Participants (N = 651)¹¹

	Not Receiving Public Assistance (N = 491)	Receiving Public Assistance (N = 160)
Item	Mean Score	Mean Score
Language Progress	3.11	2.73
Reading Progress	3.16	2.73
Math Progress	3.11	2.63
Homework Assignments	3.03	2.64
In Class Assignments	3.14	2.75
Participation in Classroom Activities	3.26	2.92

Each of the above academic progress items was statistically significant (p < 0.05) for the two groups. Teachers rated children from homes whose families did not receive public assistance higher or more positively on each of the six items compared to children whose families did receive public assistance.

Teachers were also asked to rate the child's academic progress in school compared to other similarly aged children. These items were similar to those that parents were asked to complete during the parent interview. A five-point scale was used of "well above average", "above average", "average", "somewhat below average", and "well below average". Items contained in this index included overall academic progress, motivation to do well, maturity, confidence, self-esteem, and behavior. The mean scores for Year 9 as reported by teachers for each item are reported in Table 3.23 below.

¹¹ Data collected from teachers on ECEAP Study participants is independent of the Parent Interview. Therefore, the number of participants with valid teacher-supplied data is different from the number with valid Parent Interview data.



Table 3.23

Mean Scores for Teacher Assessment of Academic Progress Items for Year 9

ECEAP Longitudinal Study Participants (N = 651)¹²

	Not Receiving Public Assistance (N = 483)	Receiving Public Assistance (N = 168)
Item	Mean Score	Mean Score
Academic Progress	3.12	2.55
Self-Direction	3.03	2.46
Motivation	3.15	2.63
Stays on Task	3.15	2.70
Sociable	3.39	3.13
Mature	3.22	2.96
Well-Behaved	3.50	3.19
Confident	3.14	2.83
Self-Esteem	3.11	2.75
Motor Skills	3.48	3.38

All items from the teacher-reported Academic Progress Index were scaled to give a global rating of academic progress. The global academic progress scale score for children living in families not receiving public assistance was 3.23 (slightly higher than "average" ratings); the global academic progress scale score for children living in families receiving public assistance was 2.86 (slightly lower than "average" ratings). A statistically significant difference (p < 0.05) was found between the academic progress scale mean scores for those who did and did not receive public assistance. Those children who lived in families not receiving public assistance had higher academic progress scale scores than those children in families who did receive public assistance and this was not due to chance alone. No significant differences were found between families who do and do not receive public assistance in Year 10 of the study.

School Changes During Past Year. Changing schools during the school year is often disruptive to children's educational progress. In order to determine if the child had changed schools during the past year, parents were asked during the Parent Interview if such a move had occurred during the past year and if so, how many times. Approximately 9 percent of the

¹² Data collected from teachers on ECEAP Study participants is independent of the Parent Interview. Therefore, the number of participants with valid teacher-supplied data is different from the number with valid Parent Interview data. In addition, teacher data is collected on three separate forms which also produces variability in the number of participants with valid teacher-supplied data on any of the three data collection forms.



Year 9 study participants (N=65) had changed schools during the past year; 37 of the participants who changed schools were from families who did not receive public assistance and 28 were from families who did receive public assistance. A statistically significant (p < 0.05) difference was found between the two groups on this variable. Children from families who did receive public assistance had a higher than expected number of school changes during the past year. The majority of those who changed schools changed only once during the past year. Data collected at Year 9 also revealed that children from families who received public assistance were absent from and tardy to school significantly more often than were children whose families did not receive public assistance (p < 0.05).

No differences were found in Year 10 in the number of school changes between families who did and did not receive public assistance. Fifteen percent of the all the Study children at Year 10 experienced a change in schools during the past year. Twenty percent of the children who had families that received public assistance experienced a change in schools, while 15 percent of the children whose families did not receive public assistance experienced a change in schools during their past school year. Statistically significant differences (p < 0.05) were found on the number of days absent from school and the number of times tardy between families who did and did not receive public assistance. Children from families who received public assistance were absent from and tardy to school significantly more often than were children whose families did not receive public assistance.





CHAPTER 4

SUMMARY AND CONCLUSION

Conclusion

As previously stated, the overall goal of ECEAP is to increase the educational and social proficiency of children from low-income families. It is presumed that gains made in these areas will assist children in dealing with their environment, as well as facing the challenges of the educational process. Findings from Year 9 and 10 of the ECEAP Longitudinal Study provide evidence that the ECEAP program is successful in meeting their overall goal.

Evidence from the Longitudinal Study indicate that caretakers of children in ECEAP continue to earn wages through jobs and are less reliant upon public assistance as an income source. The family's ability to move off public assistance and find employment suggests greater self-sufficiency and stability among families than at the beginning of the Study period. This sustained self-sufficiency is quite promising given findings that 50 percent of women who voluntarily left Aid to Families with Dependent Children returned within 2 years (Meyer, 1998).

Findings

An analysis of the data that have been gathered since the first year of the Study indicate that ECEAP families are becoming more financially stable and self-sufficient. There continues to be a shift in poverty status for ECEAP families since their enrollment in the Study. In Year 9, 52 percent fewer ECEAP group participants were at or below the poverty level than at the time of their enrollment into ECEAP. The decline in the percentage of ECEAP families living in poverty continued at Year 10 of the Study. Sixty-four percent of the ECEAP group families were above the poverty level in 1998 — fifty seven percent fewer families in poverty than at enrollment.

There was also a shift in poverty status for the Comparison group families in Years 9 and 10. Since enrollment in the Study, over 20 percent fewer Comparison group participants were at or below the poverty level. The ECEAP group members have historically had a larger percent of members in poverty since this group has historically had a lower annual income than have the Comparison group members. The ECEAP group members have had lower annual incomes than the Comparison group members every year since the Comparison group entered the Longitudinal Study in Year 4. Even among those Study participants living in poverty, ECEAP group members have had the lowest incomes. Therefore, it is not surprising to find a greater percent of ECEAP group members at or below poverty level than Comparison group members.

The ECEAP Longitudinal Study participants were asked to report the sources of their income each year during the Parent Interview. Most ECEAP group participants and Comparison group participants had at least

one income source at Study enrollment. There was an increase in multiple sources of income from enrollment to Year 9. Approximately 16 percent of the ECEAP group participants had two or more sources of income at enrollment; 43 percent of ECEAP group members had two or more sources of income during Year 9. Twenty-nine percent of the Comparison group members had two or more sources of income at enrollment while 62 percent had multiple income sources during Year 9.

Year 10 data on the number of income sources by group participation was somewhat different than Year 9 data. Although 49 percent of the ECEAP group participants reported having more than one income source, only 33 percent of the Comparison families reported having multiple income sources. This finding is most likely due to Comparison group members living above the poverty level relying almost exclusively on wages as their primary source of income.

The dependence on public assistance continues to decrease among those ECEAP families at or below the poverty level. Sixty-five percent of the ECEAP group participants received public assistance at enrollment; less than half of the Study participants at or below poverty level received public assistance as a source of income during Year 9. These data are very similar to the Year 10 data. The most notable shifts from enrollment through Years 9 and 10 were the decrease in public assistance and the increase of wages as an income source.

The result of families receiving less public assistance but moving out of poverty is promising given recent research. The portion of the population on welfare has never been identical to the portion of the population living in poverty. Because some states have been free to set benefit and eligibility requirements, most states have controlled costs by setting income eligibility requirements well below the federal poverty level. Therefore it should not be surprising that recent research overwhelmingly observes that families leaving welfare do not simultaneously leave poverty (Shlay & Holupka, 1992; Plotnick, 1997; Burtless, 1997; Meyer, 1998).

For those families that continue to receive public assistance, the results of this study indicate a continuing struggle for themselves and their children. Compared to families who do not receive public assistance, those participants who received public assistance:

- had less family resources (e.g., food for two meals a day, dependable transportation, money to pay medical bills);
- reported children's overall health as being poorer (Year 10 only);
- took their children to the doctor less often;
- were less likely to have health insurance;
- felt more depressed;



- had less time for their children and families and lacked the skills necessary to help their children (Year 9 only);
- felt less control of their future (Year 10 only);
- had an overall lower sense of well-being;
- felt their children did not enjoy school as much;
- had more negative perceptions of their children's academic progress; and
- had children who were more frequently tardy and absent from school

Many of the families involved in ECEAP were able to make strides to move off public assistance and avoid many of the consequences described above. Given the findings over the past several years of the ECEAP Longitudinal Study, it appears ECEAP is being successful in achieving the overall goal it set out in 1988 of bringing about a greater degree of educational and social proficiency in children from low-income families.







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GLOSSARY

Measures of Central Tendency: The average level of scores in a distribution. The three most frequently reported measures of central tendencies are the mean, median, and mode.

Mean: The sum of individual scores divided by the number of individuals.

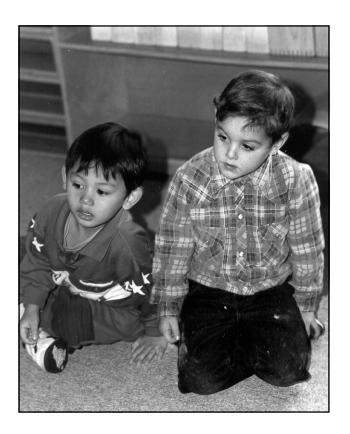
Median: The point on a scale above which and below which 50 percent of the cases fall.

Mode: The score that occurs with the greatest frequency.

N: An expression used to identify the size of the sample under investigation.

Statistical Tests of Significance: Various statistical techniques which tell us the likelihood that the study samples might have differed as much as they do by chance even if there were no differences.

p < .05: The probability that an obtained difference between different samples could occur by chance only 5 times in 100 trials.







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